AMENDMENTS TO THE CLAIMS

The following Listing of Claims replaces all prior versions, and listings, of claims.

LISTING OF CLAIMS

1. (previously presented) A peptide comprising the amino acid sequence of formula I:

His-X^2-X^3-Gly-X^5-Phe-X^7-X^8-X^9-X^{10}-X^{11}-X^{12}-X^{13}-X^{14}-X^{15}-X^{16}-X^{17}-X^{18}-Ala-Arg-X^{21}-Phe-Ile-X^{24}-Trp-Leu-Ile-X^{28}-Thr-Arg-Ile-Thr-X^{33} (formula I)

wherein X^2 is Ala, Val, or Gly; X^3 is Asp or Glu; X^5 is Ser or Lys; X^7 is Ser or Lys; X^8 is Asp, Glu, or Lys; X^9 is Asp, Glu, or Lys; X^{10} is Met, Lys, Leu, Ile, or Nor-Leucine; X^{11} is Asn or Lys; X^{12} is Thr or Lys; X^{13} is Ile or Lys; X^{14} is Leu or Lys; X^{15} is Asp or Lys; X^{16} is Asn or Lys; X^{17} is Leu or Lys; X^{18} is Ala or Lys; X^{21} is Asp or Lys; X^{24} is Asn or Lys; X^{28} is Gln or Lys; X^{33} is Asp, Glu, or Lys and at least one of X^5, X^7, X^8, X^9, X^{10}, X^{11}, X^{12}, X^{13}, X^{14}, X^{15}, X^{16}, X^{17}, X^{18}, X^{21}, X^{24}, X^{28}, and X^{33} is a Lys.

2. (currently amended) The peptide of claim 1, wherein the peptide consists essentially of an amino acid sequence:

His-X^2-X^3-Gly-X^5-Phe-X^7-X^8-X^9-X^{10}-X^{11}-X^{12}-X^{13}-X^{14}-X^{15}-X^{16}-X^{17}-X^{18}-Ala-Arg~~X^{20}~~-X^{21}-Phe-Ile-X^{24}-Trp-Leu-Ile-X^{28}-Thr-Arg-Ile-Thr-X^{33} (formula II)

wherein X^2 is Ala, Val, or Gly; X^3 is Asp or Glu; X^5 is Ser or Lys; X^7 is Ser or Lys; X^8 is Asp, Glu, or Lys; X^9 is Asp, Glu, or Lys; X^{10} is Met, Lys, Leu, Ile, or Nor-Leucine; X^{11} is Asn or Lys; X^{12} is Thr or Lys; X^{13} is Ile or Lys; X^{14} is Leu or Lys; X^{15} is Asp or Lys; X^{16} is Asn or Lys; X^{17} is Leu or Lys; X^{18} is Ala or Lys; ~~X^{20} is Arg or Lys;~~ X^{21} is Asp or Lys; X^{24} is Asn or Lys; X^{28} is Gln or Lys; X^{33} is Asp, Glu, or Lys and at least one of X^5, X^7, X^8, X^9, X^{10}, X^{11}, X^{12}, X^{13}, X^{14}, X^{15}, X^{16}, X^{17}, X^{18}, X^{21}, X^{24}, X^{28}, and X^{33} is a Lys.

3. (currently amended) The peptide of claim 1, wherein the peptide consists of an

amino acid sequence:

His-X^2-X^3-Gly-X^5-Phe-X^7-X^8-X^9-X^{10}-X^{11}-X^{12}-X^{13}-X^{14}-X^{15}-X^{16}-X^{17}-X^{18}-Ala-Arg~~X^{20}~~-X^{21}-Phe-Ile-X^{24}-Trp-Leu-Ile-X^{28}-Thr-Arg-Ile-Thr-X^{33} (formula II)

wherein X^2 is Ala, Val, or Gly; X^3 is Asp or Glu; X^5 is Ser or Lys; X^7 is Ser or Lys; X^8 is Asp, Glu, or Lys; X^9 is Asp, Glu, or Lys; X^{10} is Met, Lys, Leu, Ile, or Nor-Leucine; X^{11} is Asn or Lys; X^{12} is Thr or Lys; X^{13} is Ile or Lys; X^{14} is Leu or Lys; X^{15} is Asp or Lys; X^{16} is Asn or Lys; X^{17} is Leu or Lys; X^{18} is Ala or Lys; ~~X^{20} is Arg, or Lys;~~ X^{21} is Asp, or Lys; X^{24} is Asn, or Lys; X^{28} is Gln, or Lys; X^{33} is Asp, Glu, or Lys and at least one of X^5, X^7, X^8, X^9, X^{10}, X^{11}, X^{12}, X^{13}, X^{14}, X^{15}, X^{16}, X^{17}, X^{18}, X^{21}, X^{24}, X^{28}, and X^{33} is a Lys.

4. (currently amended) The peptide of claim 1, wherein the amino acid sequence of formula I is characterized by at least one of the following X^2 is Ala or Gly; X^5 is Ser; X^7 is Ser; X^8 is Asp or Glu; X^9 is Asp or Glu; X^{10} is selected from the group consisting of Met, Leu, Ile, and Nor-Leucine; X^{11} is Asn; X^{12} is Thr; X^{13} is Ile; X^{14} is Leu; X^{15} is Asp; X^{16} is Asn; X^{17} is Leu; X^{18} is Ala; X^{21} is Asp; X^{24} is Asn; X^{28} is Gln; and X^{33} is Asp or Glu.

5. (currently amended) The peptide of claim 2, wherein the amino acid sequence of formula II is characterized by at least one of the following X^2 is Ala or Gly; X^5 is Ser; X^7 is Ser; X^8 is Asp or Glu; X^9 is Asp or Glu; X^{10} is selected from the group consisting of Met, Leu, Ile, and Nor-Leucine; X^{11} is Asn; X^{12} is Thr; X^{13} is Ile; X^{14} is Leu; X^{15} is Asp; X^{16} is Asn; X^{17} is Leu; X^{18} is Ala; X^{21} is Asp; X^{24} is Asn; X^{28} is Gln; and X^{33} is Asp or Glu.

6. (currently amended) The peptide of claim 3, wherein the amino acid sequence of formula II is characterized by at least one of the following X^2 is Ala or Gly; X^5 is Ser; X^7 is Ser; X^8 is Asp or Glu; X^9 is Asp or Glu; X^{10} is selected from the group consisting of Met, Leu, Ile, and Nor-Leucine; X^{11} is Asn; X^{12} is Thr; X^{13} is Ile; X^{14} is Leu; X^{15} is Asp; X^{16} is Asn; X^{17} is Leu; X^{18} is Ala; X^{21} is Asp; X^{24} is Asn; X^{28} is Gln; and X^{33} is Asp or Glu.

7. (previously presented) The peptide of claim 4, wherein X^2 is Ala.

8. (previously presented) The peptide of claim 4, wherein X^2 is Gly.

9. (previously presented) The peptide of claim 4, wherein X^3 is Asp.

10. (previously presented) The peptide of claim 4, wherein X^3 is Glu.

11. (previously presented) The peptide of claim 4, wherein X^5 is Ser.

12. (previously presented) The peptide of claim 4, wherein X^7 is Ser.

13. (previously presented) The peptide of claim 4, wherein X^8 is Asp.

14. (previously presented) The peptide of claim 4, wherein X^8 is Glu.

15. (previously presented) The peptide of claim 4, wherein X^9 is Asp.

16. (previously presented) The peptide of claim 4, wherein X^9 is Glu.

17. (previously presented) The peptide of claim 4, wherein X^{10} is selected from the group consisting of Met, Leu, Ile, and Nor-Leucine.

18. (previously presented) The peptide of claim 4, wherein X^{11} is Asn.

19. (previously presented) The peptide of claim 4, wherein X^{12} is Thr.

20. (previously presented) The peptide of claim 4, wherein X^{13} is Ile.

21. (previously presented) The peptide of claim 4, wherein X^{14} is Leu.

22. (previously presented) The peptide of claim 4, wherein X^{15} is Asp.

23. (previously presented) The peptide of claim 4, wherein X^{16} is Asn.

24. (previously presented) The peptide of claim 4, wherein X^{17} is Leu.

25. (previously presented) The peptide of claim 4, wherein X^{18} is Ala.

26. (previously presented) The peptide of claim 4, wherein X^{21} is Asp.

27. (previously presented) The peptide of claim 4, wherein X^{24} is Asn.

28. (previously presented) The peptide of claim 4, wherein X^{28} is Gln.

29. (previously presented) The peptide of claim 4, wherein X^{33} is Asp.

30. (previously presented) The peptide of claim 4, wherein X^{33} is Glu.

31-34. cancelled

35. (currently amended) The peptide of claim 1, wherein the peptide is selected from the group consisting of: ~~K30R-GLP-2(1-33); S5K-GLP-2(1-33); S7K-GLP-2(1-33); D8K-GLP-2(1-33); E9K-GLP-2(1-33); M10K-GLP-2(1-33); N11K-GLP-2(1-33); T12K-GLP-2(1-33); I13K-GLP-2(1-33); L14K-GLP-2(1-33); D15K-GLP-2(1-33); N16K-GLP-2(1-33); L17K-GLP-2(1-33); A18K-GLP-2(1-33); D21K-GLP-2(1-33); N24K-GLP-2(1-33); Q28K-GLP-2(1-33);~~ S5K/K30R-GLP-2(1-33); S7K/K30R-GLP-2(1-33); D8K/K30R-GLP-2(1-33); E9K/K30R-GLP-2(1-33); M10K/K30R-GLP-2(1-33); N11K/K30R-GLP-2(1-33); T12K/K30R-GLP-2(1-33); I13K/K30R-GLP-2(1-33); L14K/K30R-GLP-2(1-33); D15K/K30R-GLP-2(1-33); N16K/K30R-GLP-2(1-33); L17K/K30R-GLP-2(1-33); A18K/K30R-GLP-2(1-33); D21K/K30R-GLP-2(1-33); N24K/K30R-GLP-2(1-33); Q28K/K30R-GLP-2(1-33); K30R/D33K-GLP-2(1-33); ~~D3E/K30R/D33E-GLP-2(1-33);~~ D3E/S5K/K30R/D33E-GLP-2(1-33); D3E/S7K/K30R/D33E-GLP-2(1-33); D3E/D8K/K30R/D33E-GLP-2(1-33); D3E/E9K/K30R/D33E-GLP-2(1-33); D3E/M10K/K30R/D33E-GLP-2(1-33); D3E/N11K/K30R/D33E-GLP-2(1-33); D3E/T12K/K30R/D33E-GLP-2(1-33); D3E/I13K/K30R/D33E-GLP-2(1-33); D3E/L14K/K30R/D33E-GLP-2(1-33); D3E/D15K/K30R/D33E-GLP-2(1-33); D3E/N16K/K30R/D33E-GLP-2(1-33); D3E/L17K/K30R/D33E-GLP-2(1-33); D3E/A18K/K30R/D33E-GLP-2(1-33); D3E/D21K/K30R/D33E-GLP-2(1-33); D3E/N24K/K30R/D33E-GLP-2(1-33); and D3E/Q28K/K30R/D33E-GLP-2(1-33).

36-77. Cancelled